

REMARKS

This is intended as a full and complete response to the Office Action dated May 21, 2003, having a shortened statutory period for response set to expire on August 21, 2003. Claims 4, 6-9, 11-13, 15, 16, 18-38, 30, 31 33-38, 40, 41, 43, 45-51, 53, and 55-56 are pending in the application and stand rejected. Applicants have amended the claims as shown herein to clarify aspects of the invention. These proposed amendments are not intended to narrow the claims or otherwise limit the scope of equivalents thereof.

Claims 4, 6-9, 11-13, 15, 16, 18-20, 23-28, 30, 31, 33-35, 37, 38, 40-47, and 49 stand rejected under 35 U.S.C § 103(a) as being unpatentable over *Williams et al.* (U.S. Patent No. 6,174,431) in view of *Greaney et al.* (U.S. Patent No. 6,013,176) and/or *Perozzi et al.* (U.S. Patent No. 5,208,382). The Examiner states that "*Williams et al.* discloses process steps corresponding to Applicants' base/phase transfer agent mixing and separation." The Examiner also notes that *Williams et al.* does not disclose a glycol phase transfer catalyst, the temperature and pressure at which the claimed separation takes place, and the claimed amount of phase transfer catalyst. The Examiner, however, asserts that it would have been obvious to select a glycol as the phase transfer agent in the process of *Williams et al.* because the references of *Greaney et al.* and/or *Perozzi et al.* illustrate that glycols are known phase transfer agents. Also, the Examiner asserts that it would have been obvious to employ any available, known phase transfer agent because the reference of *Williams et al.* suggests that one of ordinary skill in the art is able to determine acceptable phase transfer catalysts to accomplish the disclosed process.

Applicants respectfully traverse the rejection on grounds that the Examiner's assertion that it would have been obvious to employ any available, known phase transfer agent is erroneous and constitutes impermissible hindsight reconstruction of the claimed invention. *Williams et al.* discloses nothing other than a quarternary ammonium salt. (See, *Williams et al.* at col. 9, lines 34-35.) Although *Williams et al.* discloses that "[t]hose of ordinary skill in the art will be able to determine other acceptable phase transfer catalyst", this suggests nothing more than an invitation to explore. (See, *Williams et al.* at col. 9, lines 44-46.) Such a suggestion may make an approach "obvious to try" but does not make the invention obvious under § 103.

See, *Ex Parte Obukowicz*, 27 USPQ 2d 1063, 1065 (B.P.A.I. 1992) citing *In re O'Farrell*, 853 F.2d 894, 7 USPQ 2d 1673, 1681 (Fed. Cir. 1988). Obviousness is tested by what combined teachings of prior art references would have suggested to those of ordinary skill in art, not by whether a particular combination of elements from such references might have been "obvious to try." *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988). As such, Applicants submit that it fails to properly support the teaching of the claimed phase transfer catalyst.

Further, Applicants submit that *Perozzi et al.* and *Greaney et al.* are unrelated to purifying used oils, motor oils, or petroleum distillates. *Perozzi et al.* discloses a process for reducing copper corrosiveness of hydrocarbyl sulfides found in mineral oils and lard oils. (See *Perozzi et al.* at col. 3, lines 18-41.) *Greaney et al.* discloses a process for demetallating feed streams to refineries. Neither one of the references, alone or in combination, would motivate or suggest to one in the art of purifying used oils, motor oils, or petroleum distillates to pursue glycols as a phase transfer catalyst. Therefore, Applicants submit that the combined teachings of the prior art references would not have suggested using a phase transfer catalyst in the presence of a base compound, wherein the phase transfer catalyst comprises a glycol, as recited in the base claims as well as those dependent therefrom. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

Claims 21, 22, 36, 48, 50, 51, 53, and 55-56 stand rejected under 35 U.S.C § 103(a) as being unpatentable over *Williams et al.* (U.S. Patent No. 6,174,431) in view of *Greaney et al.* (U.S. Patent No. 6,013,176) and/or *Perozzi et al.* (U.S. Patent No. 5,208,382) in further view of *Habiby et al.* (U.S. Patent No. 4,021,333). The Examiner states that since "*Williams et al.* discloses that other solvents can be combined with the hydrocarbon solvent, it would have been obvious... to select N,N-dimethylformamide as a solvent because *Habiby et al.* illustrates that dimethylformamide is a suitable extraction solvent for extracting impurities from oil."

Applicants respectfully traverse this rejection. Claims 21, 22, 36, and 48 each depend from the base claims distinguished above. As such, Applicant submit that these dependent claims are patentable for at least the same reasons. Allowance of these claims is respectfully requested.

Regarding base claim 50 and those dependent therefrom, Applicants submit that the Examiner has not established a *prima facie* case of obviousness. *Habiby et*

al. adds nothing to the discussion above in regard to a process for purifying used oil, petroleum distillate, or motor oil, comprising mixing with a phase transfer catalyst in the presence of a base compound, wherein the phase transfer catalyst comprises a glycol. *Habiby et al.* is only used by the Examiner to show that N,N-dimethylformamide is a solvent. This is not *prima facie* obviousness unless there is some motivation or suggestion within the references themselves to combine their teachings.

To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Further, the teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, not in the Applicants' disclosure. See M.P.E.P. § 2143, citing *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Still further, the Examiner must *particularly* identify any suggestion, teaching or motivation from within the references to combine the references. See *In Re Dembicza*k, 50 USPQ2d 1614 (Fed. Cir. 1999). The mere recitation of a combination of references does not amount to particularly identifying a suggestion, teaching, or a motivation to combine the references.

As stated above a combination of *Williams et al.*, *Greaney et al.*, and *Perozzi et al.* does not motivate or suggest a process for purifying used motor, comprising mixing the used motor oil with a glycol in the presence of a base compound, as recited in base claim 50. This combination also does not motivate or suggest mixing the used motor oil with N,N-dimethylformamide to dissolve contaminants from the used motor oil into the solvent, as further recited in base claim 50. In fact, neither *Greaney et al.* nor *Perozzi et al.* disclose or suggest use of any solvent. *Williams et al.* teaches liquid propane and other "hydrocarbon solvents such as C₂-C₅ saturated hydrocarbons". (See *Williams et al.* at col. 10, lines 33-36.) *Williams et al.* does not motivate or suggest an amide solvent as claimed in the present invention. Hydrocarbons and amides are not synonymous and are not similar. Therefore, the Examiner has mistakenly asserted that *Williams et al.* makes a blanket suggestion to use solvents other than hydrocarbon solvents. Furthermore, such a blanket suggestion to use "other solvents", as asserted by the Examiner, may make an approach "obvious to try" but does not make the invention obvious under § 103. See, *Ex Parte Obukowicz*, 27 USPQ 2d 1063, 1065 (B.P.A.I. 1992) citing *In re O'Farrell*, 853 F.2d 894, 7 USPQ 2d 1673, 1681 (Fed. Cir. 1988). Accordingly,

Applicants submits that the combination of the references does not teach, show, or suggest the claimed invention. Withdrawal of the rejection and allowance of the claims is respectfully requested.

In conclusion, Applicants submit that the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed invention. Having addressed all issues set out in the Office Action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the Office Action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this Office Action. Accordingly, allowance of the claims is respectfully requested.

Respectfully submitted,



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